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Relationships of the Pacific warbler *Cicblornis* and its allies

by S. Dillon Ripley

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Recently Hadden (1983) described a new species of thicket-warbler of the genus *Cicblornis* from Bougainville Island, North Solomons Province, Papua New Guinea. This new taxon, *C. llanaeae*, was based on a single unsexed study skin, mist-netted in the forested hills above the site of the Panguna Copper Mine. Subsequent to this remarkable discovery, additional specimens of the new bird have been procured, and additional new information on its biology has been assembled, based on the results of a field trip to Bougainville Island sponsored by the Smithsonian Institution. Here I report these new findings, and comment on the relationship of this new taxon to other thicket-warblers and on their relationships to other Pacific warbler genera.

Bruce Beehler visited Bougainville Island 11-19 June 1980 in order to conduct a brief avifaunal survey of the montane forest where Hadden had discovered the thicket-warbler, and by mist-netting to obtain for the Smithsonian a series of montane forest birds endemic to Bougainville, especially additional representatives of the new thicket-warbler. Hadden gave generous assistance and in addition visited the collecting camp for 3 days while Beehler was there.

During this trip 2 specimens of the new *Cicblornis* were taken, sexed and prepared as study skins, one of the birds being trapped while brooding 2 eggs on a nest. These 2 specimens are of great value because they provide information on sexual dimorphism, adult plumage, weight, rectrix shape, tail length, and soft part coloration, hitherto unavailable for the Bougainville population. These data appear in Table 1 along with information from the holotype of *llanaeae*.

TABLE 1
Compiled biometric data for the Bougainville Thicket Warbler

	HOLOTYPE	SPECIMEN #2	SPECIMEN #3
Collector	D. Hadden	B. Beehler	B. Beehler
Date taken	17.6.1979	15.6.1980	16.6.1980
Field No.	—	100	136
Museum #	AMNH 824713	USNM 584968	USNM 584969*
Sex	—	♀	♂
Gonad	—	ova tiny	testis 3 x 1 mm
Weight	—	27 g	24 g
Wing (chord)	70	70.8	71.5
Wing (arc)	72	72	74
Culmen (base)	21	19.5	19
Tarsus	23	24	25
Tail	damaged	44.5	51.5
Moult	tail in sheath	none	3 lead primaries
Iris	—	very dark brown	very dark brown
Leg colour	dark	dark vinaceous-brown	blackish brown, with vinaceous tinge
Brood patch	—	present	absent
How captured	mist net	netted by nest	netted near ground
Stomach contents	—	small hard-bodied insects	tiny black insects
Bill colour	dark	black	black

*Now lodged in the Papua New Guinea Museum, PNGM 18287.

The comparisons in Table 1 show that the small series is relatively uniform. As occurs in other forms of *Cicblornis*, the male shows a significantly longer tail, but otherwise sexual dimorphism is slight. In this Bougainville population the tail is medium-length, and the rectrices are complete and undegraded. The similarity of the new material to that of the holotype indicates that the original description is based on an adult specimen.

The female collected on 15 June was brooding 2 eggs (one with a nearly fully developed chick), exhibited a brood patch, and on dissection showed no enlarged ova. It is interesting to note that the same nest site was occupied by this species at the same period on successive years. Both specimens collected in 1980 had small pieces of hard-bodied insects in their stomachs. The stomach wall was noted to be strong and muscular.

As the original description included no information on the habitat of the Bougainville *Cicblornis*, here I include a brief summary based on Beehler's observations. The area where the 3 specimens were netted was an undulating but relatively flat expanse of wet montane forest atop a ridge of the Crown Prince Range. Forest canopy stood at about 15 m, although much light penetrated to the lower stories, permitting considerable growth of saplings, bamboo and ferns. Because of the continually high humidity in the forest, virtually all surfaces were coated with a thick growth of moss. Rain fell every day during the 1980 field trip, and blue sky was encountered only in the early morning and late afternoon. The area certainly receives in excess of 4000 mm of rain per annum (cf. McAlpine *et al.* 1973, Hadden 1981).

The thicket-warbler shared the forest with a rather impoverished montane bird community. The 110 birds netted included 17 species: 2 pigeons, 3 swiftlets, one cuckoo, 2 thrushes, an additional warbler, one robin (*Petroica*), one fantail, one whistler, one white-eye, 2 honeyeaters, and one estrildid finch.

Little was learned of the vocalizations of the *Cicblornis*. No free-flying birds were observed to call, but the female gave a scold while in the net, a shrill "shreed - shreed." Elsewhere Beehler (1983) has commented on a well-known, but unidentified song delivered by some montane forest bird on Bougainville (cf. Diamond 1975). There is still the possibility that it may belong to *Cicblornis*.

Hadden commented briefly on relationships of the Bougainvillean population with other Pacific Island warblers. After examining specimens available at the American Museum of Natural History (New York) and the National Museum of Natural History (Washington, D.C.) I have drawn conclusions which differ markedly from those of Hadden. Noting the range of morphological variation exhibited by the 4 insular forms of "*Cicblornis*", I do not believe *llanae* merits full species status. It is best to treat the entire "genus" as a single polytypic species, especially in view of the range of infraspecific variation among other widespread Melanesian forms (cf. Mayr 1931, Galbraith 1956, Ripley & Hadden 1982). In comparison with racial variation among the island forms of *Halcyon chloris*, *Turdus poliocephalus*, or *Pachycephala pectoralis*, the inter-island differences exhibited by *Cicblornis* are only slight - modest variation in tail and tarsal length and no known differences in habits or biology. Geographical distribution supports this treatment, with island representatives ranging from New Britain in the west (*grosvenori*), 2 intermediate forms (*llanae* and *turipavae*) in the Solomons, and the easternmost representative on Espiritu Santo, New Hebrides (*whitneyi*).

Differences in plumage coloration between the island forms are slight, and all birds show a standard pattern. Perhaps the major difference shown by *llanae* is that the tail feathers of the other island thicket warblers are described as strongly pointed and with a spiny shaft. At least in 2 cases (*whitneyi* and *grosvenori*) where the tail is well described, the unusual condition appears to be a product of feather age and degradation of the barbules and barbs. Both specimens were collected in December, presumably just prior to annual moult when feather wear is greatest. The 2 new specimens from Bougainville were taken in June and show relatively fresh plumage, with the tail feathers pointed, but not degraded, and non-spiny.

Generic relationships among the Pacific island warblers also require reassessment. The tendency of past describers of new island forms is to erect a new genus for each new taxon (cf. Sclater 1881, Reichenow 1890, Mayr 1933). Given the paucity of specimens or data on their biology, generic relationships have been ignored, and several superfluous generic epithets remain in regular usage today. As has been suggested by Orenstein (see Hadden 1983: 24), *Megalurulus* Verreaux, 1869, can be the name for an enlarged Pacific genus that includes *Cicblornis* Mayr, 1933, *Buettikoferella* Stresemann, 1928, and *Ortygocichla* Sclater, 1881. They are clearly linked by the head and facial patterning, pale scalloping on the outer secondary coverts (absent in *whitneyi*), bill construction and Pacific island distribution. All show very much reduced rictal bristles. With its soft tail, *llanae* forms a link with the slightly divergent *rubiginosa*. In New Britain, the only island that supports 2 species of this expanded genus, one of the species (*grosvenori*) inhabits montane moss forest, while the other (*rubiginosa*) dwells in lowland rainforest.

Discrete from the expanded *Megalurulus* is *Trichocichla*, containing the single species *rufa*, from Viti Levu, Fiji. I would suggest that *rufa* may have

affinities with *Bowdleria rufescens* of the Chatham Islands. Both show a predominantly white throat and underparts. These 2 perhaps should be united? They lack the scalloping on the secondary coverts, and both inhabit islands east of the main part of Melanesia.

In sum, I suggest that the Pacific Island warblers are revised as below:

Genus	Species	Subspecies
Megalurulus	bivittatus	
	rubiginosus	
	whitneyi	grosvenori llaneae turipavae whitneyi
Trichocichla	mariae	
	rufa	rufa clunee
Bowdleria	rufescens	
	punctata	

Perhaps the most important fact common to all of the taxa treated here is that too little is known about any of them. The Pacific island montane forest habitats are much under-studied, as became clear when as little as 12 days of mist-netting in the mountains of Bougainville produced 3 new breeding forest species for the island. Longer-term, systematic survey operations would be most useful in producing more data on these elusive sylviines, and would also permit a full biotic assessment of the wildlife resources of this rich group of island archipelagoes.

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